

***2000 Dental Hygiene  
Workforce Survey Results***

***December 2000***

## **Contents**

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	<u>Page</u>
Contents .....	1
Executive Summary .....	3
Overview of Survey .....	6
Analysis .....	9
Survey Response Detail .....	12
Discussion and Recommendations .....	48
Attachment A: Dental Hygienist Rates by County .....	51
Attachment B: Survey Instruments and Materials .....	54

## **Executive Summary**

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The Dental Hygiene Association of Wisconsin collaborated with the Wisconsin Dental Association to create the Dental Workforce Group. The Workforce determined a survey of registered dental hygienists in Wisconsin was crucial in order to understand the needs of Wisconsin's dental hygiene consumers, as well as assist with setting priorities for dental hygiene practice in Wisconsin. The Workforce gratefully thanks Dennis Peterson of Delta Dental for providing the funding necessary to conduct the survey. The Workforce commissioned Innovative Resource Group: Consulting Division to assist with development, delivery, and analysis.

A three-page written survey was mailed to 3,364 dental hygienists in Wisconsin. 1,714 dental hygienists responded (51.1%). The survey consisted of 44 questions, which focused on understanding the current state of dental hygiene practice in Wisconsin. Results from the survey raised a number of issues:

- Nearly all dental hygienists are women (99.2%).
- Nearly all dental hygienists are white (98.9%).
- The average age of hygienist is 40.6 years old.
- The average number of years practicing is 14.6 years.
- The distribution of dental hygienists throughout Wisconsin is quite variable, ranging from a high of 12.58 per 10,000 in Pepin County to a low of 0 per 10,000 in Crawford County.
- Of the dental hygienists who report they are no longer working as dental hygienists, 35.8% reported it was because they changed professions. 32.4% reported it was because they were choosing not to work.
- The average number of hours worked in a week is 27.82.
- 76.8% work in one practice in setting.
- 52.9% have worked at their current practice location for at least 5 years.
- 89.4 % do not work with a dental hygiene assistant.
- 95.2% report being satisfied with their job as a dental hygienist.
- 1 out of 4 do not feel there are enough dental hygienist job opportunities available to them. 84.7% report believing that there were enough dental hygienists in their area to provide adequate care to patients.
- 80.9% do not agree that patients are limited in their ability to access dental hygiene services in their area.
- 75.4% report that they have enough time to educate and care for their patients.
- 93.2% feel they are valued as an employee.
- The average per hour wage was \$23.53.
- 1/3 reported that they were the primary wage earner in the home.
- 2/3 reported that they received health or other benefits from a spouse.

Responses to the survey suggest a number of considerations, recommendations. The following items should be reviewed for consideration:

- Demographic profile of dental hygienists. Do people choose dental hygiene as a profession based on major life events, such as child-rearing, and the need for part-time income?
- Late entry into the profession. Are high school graduates considering dental hygiene as a career path?
- Lack of gender and racial diversity. There is a significant absence of minorities who are dental hygienists.
- Lack of employer based benefits. Do limited health care benefits reduce retention or recruitment into the dental hygiene profession?

## Overview of Survey

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This report details the results of the 2000 Dental Hygiene Workforce survey. The Dental Hygiene Association of Wisconsin (DHAW) and the Wisconsin Dental Association (WDA) collaborated to form the Dental Hygiene Workforce. The Workforce directed the survey. The survey's intent is to understand the demographics of dental hygienists in Wisconsin. Additionally, the survey is to help assess the future needs of Wisconsin's dental hygiene consumers. The findings of the survey will be provided to State and Federal policymakers ensuring that registered dental hygienists will continue to play an important role in the dental health of Wisconsin's population.

Innovative Resource Group: Consulting Division (IRG) worked closely with the Dental Hygiene Workforce to develop the survey instrument. The instrument consisted of 44 questions. These questions focus on understanding the facets of dental hygiene practice. The instrument is a paper survey. The administration of the survey instrument consisted of:

- Introductory postcard sent one week prior to the survey delivery
- Survey and cover letter were sent in a windowed, full-size envelope. The envelope was labeled "IMPORTANT: Dental Hygiene Workforce Survey Enclosed"
- A postage-paid return envelope was provided
- Surveys were accepted for 16 days (12 business days) following the mailing
- Surveys were spot checked for errors, then scanned into the relational database
- Data was error checked, then exported to SAS for basic frequency and numeric analysis

Because of the relative small size of the dental hygienists in Wisconsin, no sampling was done. Surveys were sent to all dental hygienists licensed in the state of Wisconsin. The data set was received from the Wisconsin Department of Regulation and Licensing. The full data set included 4,107 members. Certain members were excluded from the final survey mailing list. The members were excluded for the following reasons:

- Residence was outside the state of Wisconsin
- Questionably accurate data including, but not limited to, missing or clearly incorrect dates
- Incomplete address information that would preclude proper mailing

The final mailing list was 3,364 members.

Surveys were no longer received for analysis beyond October 13, 2000 (16 days following the original mailing). 1,722 surveys were scanned in. This number dropped slightly to 1,714 due to a small number of surveys that had been scanned in twice. The duplicates were removed before analysis. Approximately 151 surveys have been received since October 13, 2000. The results from these surveys are not included. Based on returned mail, 10 surveys came back due to bad addresses. Therefore, the return rate for the survey was:



Surveys Mailed	Surveys Returned Undeliverable	Surveys Delivered	Unique Surveys Used for Analysis	Surveys Returned Post-analysis	Analysis Return Rate	Overall Return Rate
3,364	10	3,354	1,714	151	51.1%	55.6%

## Analysis

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1714 unique surveys made up the data set used for the Dental Hygiene Workforce Analysis. A number of steps were taken to cleanse the data, and reduce the number of response errors.

In addition to cleansing based on questions, incorrectly responded to, certain values were removed. These values were believed to have been entered in error, or potentially in a malicious nature. The values remain in the dataset, but were removed from calculations of N, MIN, MAX, and MEAN.

As stated earlier, surveys were sent to all members reported with dental hygiene licenses in the state of Wisconsin. Certain records were excluded, resulting in 3,364 surveys mailed. 1,714 surveys were returned and used for analysis, resulting in a 51% return rate. In order to draw inferences that the survey sample is adequately representative of the dental hygienist population as a whole, certain comparisons were made. That is, are there differences in the full survey population compared to those who returned a survey? This analysis looked at age, years practicing, and geographic location.

Age was calculated based on the date of birth, as provided by the Department of Regulation and Licensing, at the time of mailing. That is, what was the person's age on October 1, 2000? Years practiced was calculated based on original license date compared to October 1, 2000. The age comparison between those who were sent a survey and those who returned a survey is:

Average Age of Original Sample	Average Age of Those who Returned Survey	Average Years Practicing of Original Sample	Average Years Practicing of Those Who Returned Survey
40.8	40.6	14.9	14.6

There does not appear to be any significant difference between the sample size, and the people who returned surveys when comparing by age, and years in practice.

Surveys were sent to dental hygienists in all counties in the state of Wisconsin<sup>1</sup>, with the exception of Crawford County. Crawford County was excluded because there were no dental hygienists with zip codes that mapped to Crawford County. The numbers ranged from a low of 1 (Iron, Florence, Menominee, and Green Lake Counties) to a high of 386 (Milwaukee County). Surveys were returned from members in all counties except Jackson, Buffalo, and Menominee Counties. The survey return rate for those who returned surveys ranged from a low of 27% (Ashland County) to a high of 100% (Iron, Forest, Rusk, Langlade, Florence, Green Lake, and Lafayette Counties). The average return rate by county was 64.2%. There does not seem to be a significant geographical

<sup>1</sup> Counties were determined by mapping zip codes provided in the Department of Regulation and Licensing data set. Because zip codes can cross county lines, there are a small number of members who may have been assigned into multiple counties because of this. Additionally, there appear to be incorrect zip codes in the data set that could not be mapped.

difference between those who received a survey compared to those who returned the survey.

Questions 16 through 22 ask various questions within a “Strongly agree” to “Strongly disagree” scale. In addition to the actual results, positive responses (Strongly agree plus Agree) and negative responses (Strongly disagree plus disagree) are summarized.

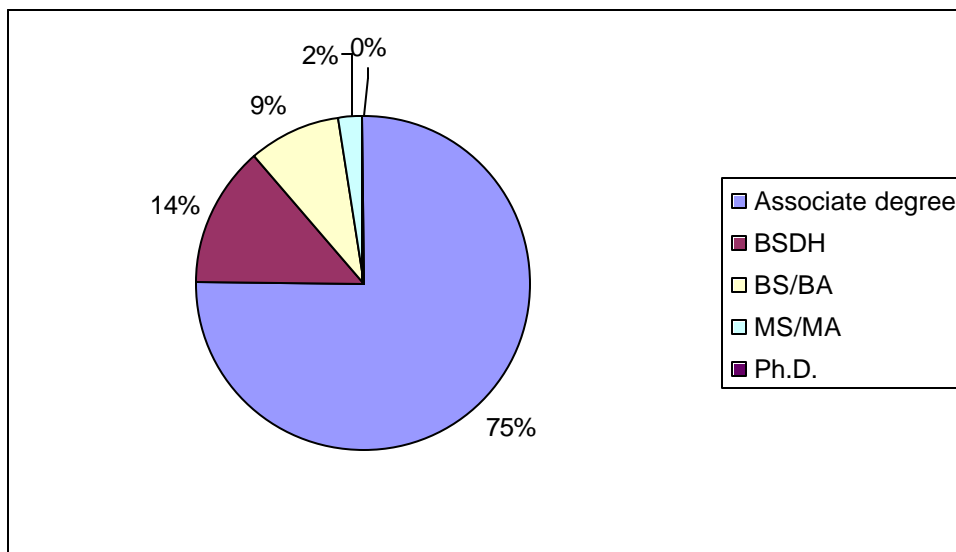
## **Survey Responses**

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**Question 1:**

The majority of the respondents reported an Associate Degree as their highest level of education. The next largest was Bachelors of Science in Dental Hygiene.

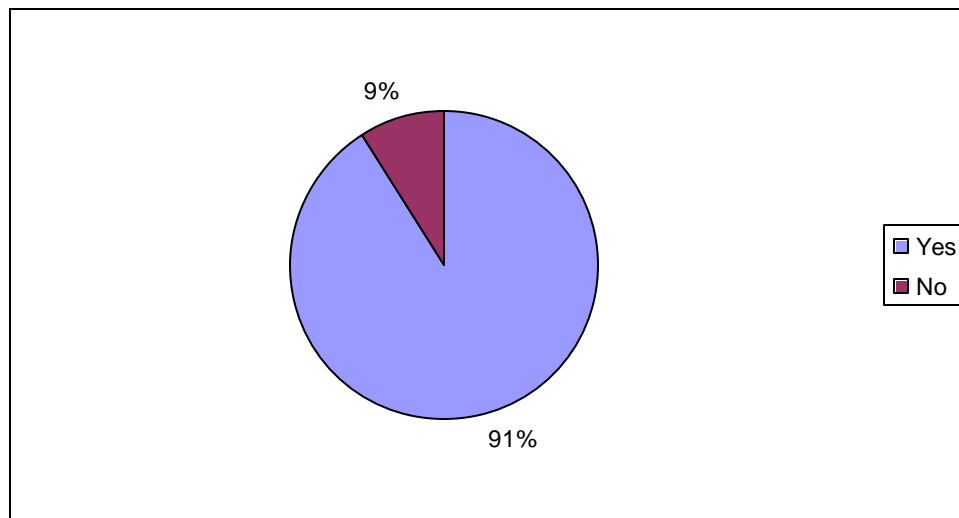
<b>Q1. What is your highest level of education?</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
Associate degree	1276	75.1%
BSDH	232	13.6%
BS/BA	156	9.2%
MS/MA	35	2.1%
Ph.D.	1	0.1%
<b>N</b>		<b>1700</b>



**Question 2:**

The majority of respondents reported they are currently working as a dental hygienist.

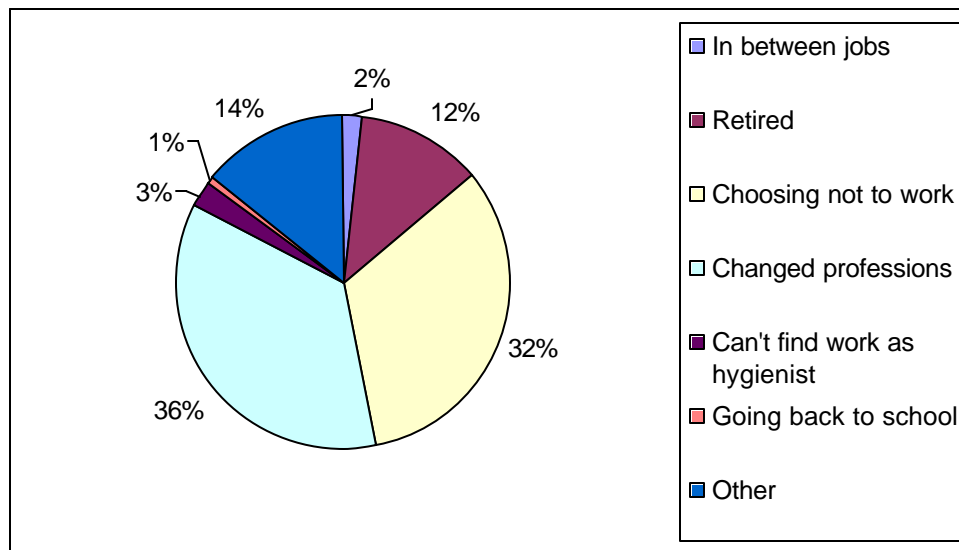
Q2. Are you currently working as a dental hygienist?		
Response	Frequency	%
Yes	1547	91.2%
No	149	8.8%
<b>N</b>		1696



**Question 3:**

Of those respondents who stated they were not working as a dental hygienist, the largest group stated that they had changed professions, followed by those who are choosing not to work. An area of further study and analysis for the Dental Hygiene Workforce might be to better understand why people are changing professions, and to what profession they are changing, in hopes of retaining more dental hygienists within the workforce.

<b>Q3. If no, please select the best reason why not.</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
In between jobs	3	2.0%
Retired	18	12.2%
Choosing not to work	48	32.4%
Changed professions	53	35.8%
Can't find work as hygienist	4	2.7%
Going back to school	1	0.7%
Other	21	14.2%
<b>N</b>		<b>148</b>

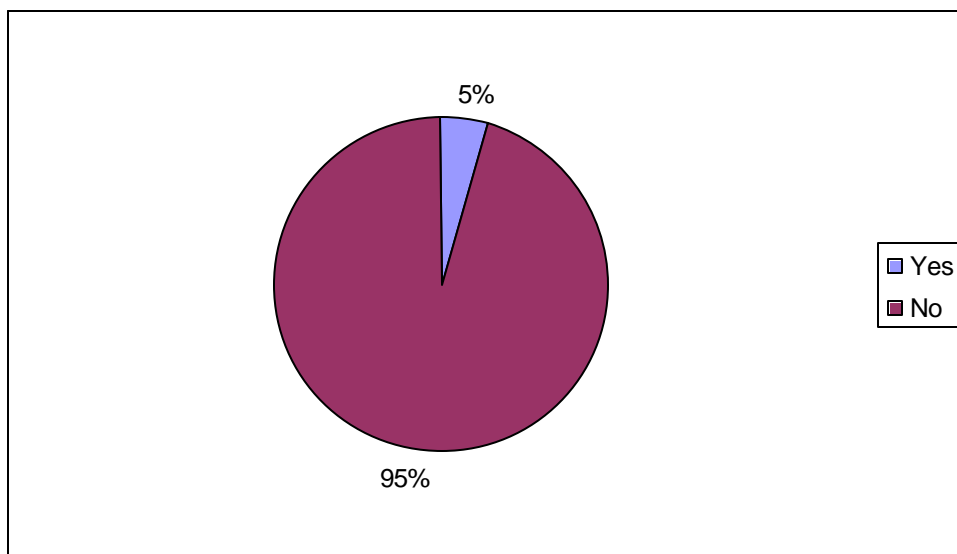




**Question 4:**

A small percentage of respondents reported that they were currently seeking employment.

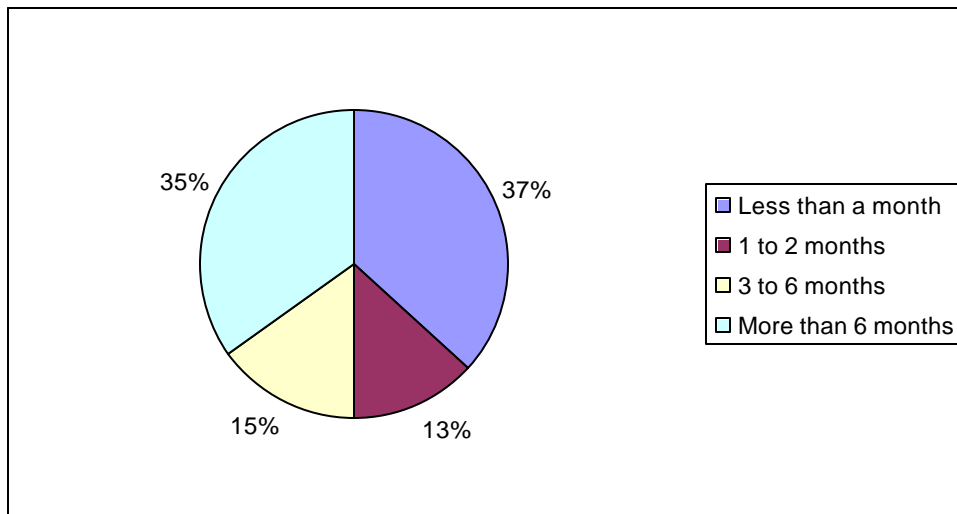
<b>Q4. Are you currently seeking employment as a dental hygienist?</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
Yes	69	4.6%
No	1424	95.4%
<b>N</b>	<b>1493</b>	



**Question 4a:**

Of those who stated they were actively looking for work, an equal amount reported that the duration was less than a month as those who reported looking for more than 6 months.

<b>Q4a. If yes, how long have you been seeking employment?</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
Less than a month	22	36.7%
1 to 2 months	8	13.3%
3 to 6 months	9	15.0%
More than 6 months	21	35.0%
<b>N</b>		<b>60</b>



**Question 5:**

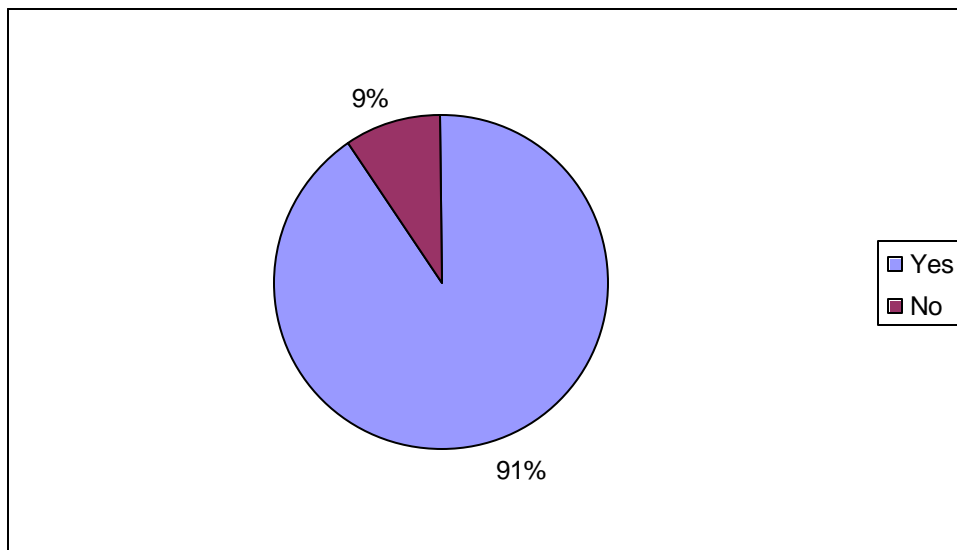
On average, dental hygienists work on a part-time basis, with the hours worked in a week reported as 27.82.

<b>Q5. Indicate the average number of hours per week for which you work as a dental hygienist.</b>			
<b>Response</b>	<b>Mean</b>	<b>High</b>	<b>Low</b>
Hours per week	27.82	76	1

**Question 6:**

Most respondents stated that they worked as many hours as they would like.  
Approximately 1 in 10 stated that they did not work as many hours as they would like.

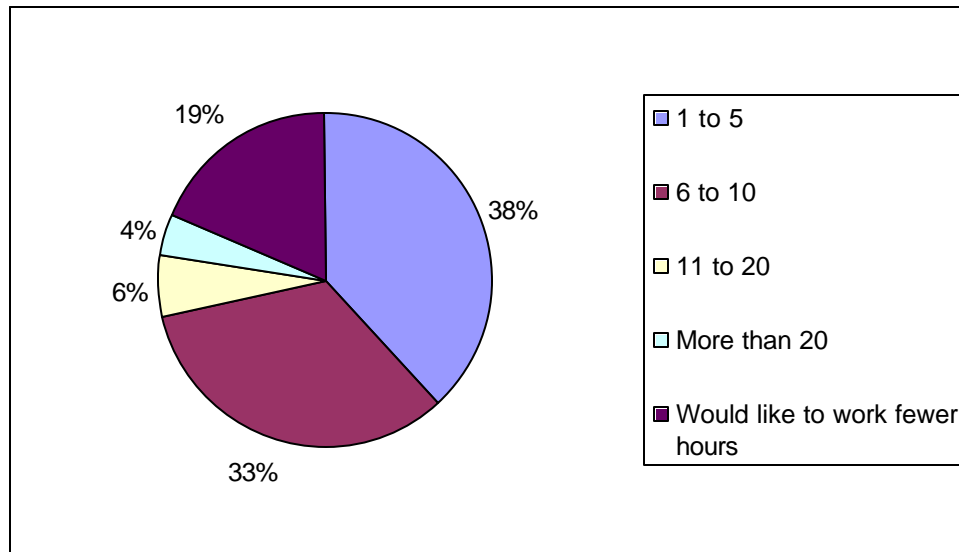
Q6. Do you work as many hours as you would like?		
Response	Frequency	%
Yes	1407	90.5%
No	147	9.5%
N		1554



**Question 6a:**

Of the people who reported that they did not work the amount of hours they desired, the majority wanted to increase their weekly hours by no more than 10. Additionally, 2 out of 10 stated they would rather reduce the number of hours they were working.

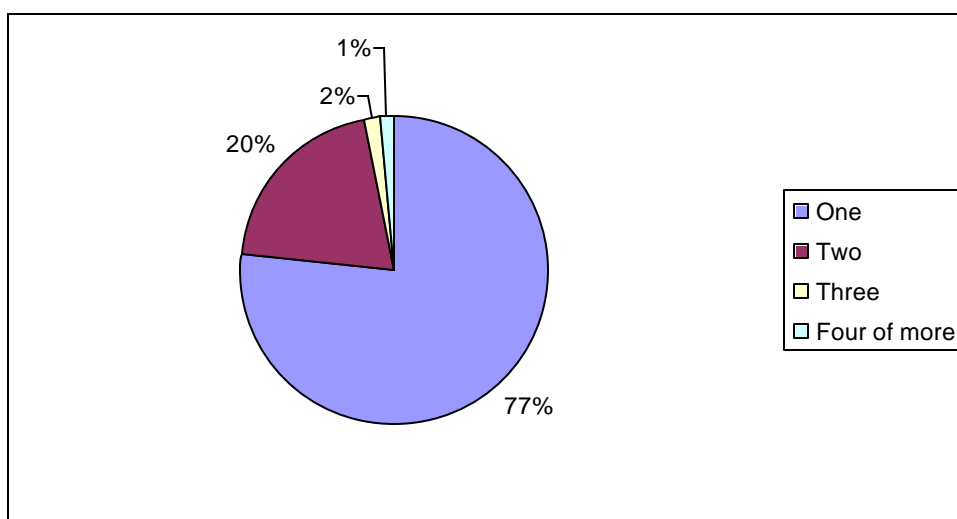
<b>Q6a. If no, how many <u>more</u> hours would you like to work?</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
1 to 5	55	37.9%
6 to 10	48	33.1%
11 to 20	9	6.2%
More than 20	6	4.1%
Would like to work fewer hours	27	18.6%
<b>N</b>		<b>145</b>



**Question 7:**

Most respondents report they work at one setting.

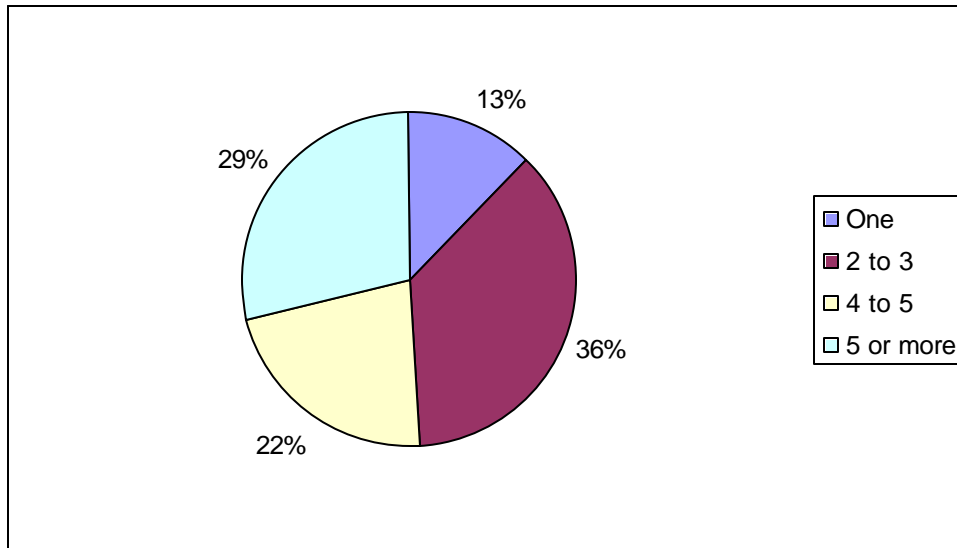
<b>Q7. How many practices/settings do you provide dental hygiene services to?</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
One	1189	76.8%
Two	311	20.1%
Three	29	1.9%
Four of more	20	1.3%
<b>N</b>	<b>1549</b>	



**Question 8:**

Dental hygienists work at many different settings over the course of their professional work.

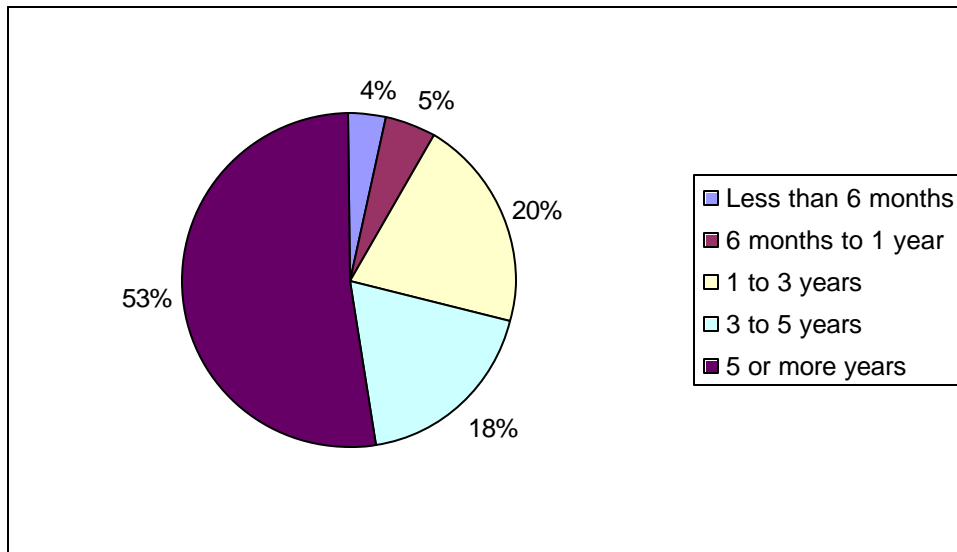
<b>Q8. At how many different practices have you worked since you have been licensed as a dental hygienist?</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
One	194	12.5%
2 to 3	564	36.5%
4 to 5	338	21.8%
5 or more	451	29.2%
<b>N</b>		<b>1547</b>



**Question 9:**

Nearly half of the respondents stated that they have been working at their current location for at least 5 years. Nearly all of the respondents report working at the current setting at least one year.

<b>Q9. How long have you worked at the location where you provide the majority of your dental hygiene services?</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
Less than 6 months	60	3.9%
6 months to 1 year	76	4.9%
1 to 3 years	317	20.4%
3 to 5 years	281	18.0%
5 or more years	823	52.9%
<b>N</b>	<b>1557</b>	





**Question 10:**

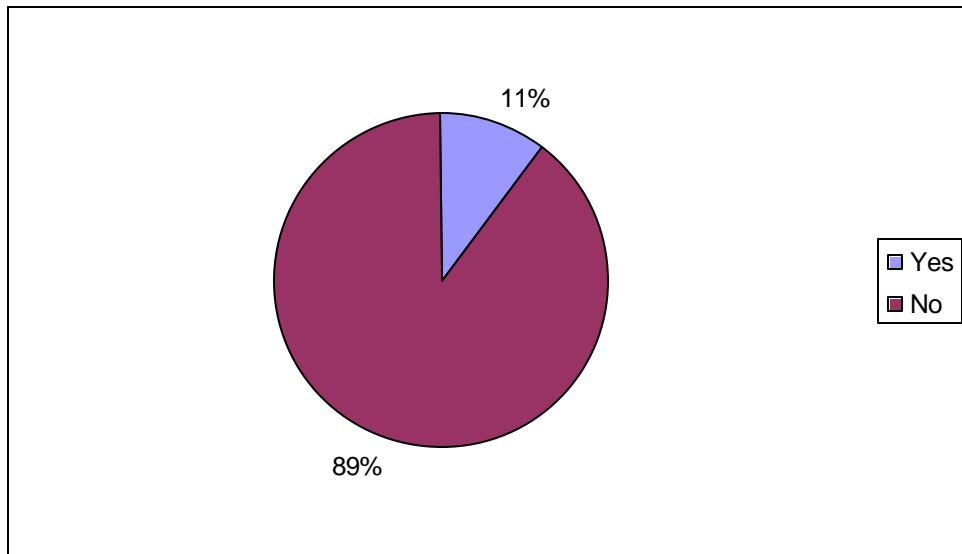
The average number of open dental hygienist positions is relatively small. There is little difference noted between open positions for full-time versus part-time.

<b><i>Q10. At the location where you provide the majority of your dental hygiene services, how many open dental hygienist positions are there?</i></b>			
<b>Response</b>	<b>Mean</b>	<b>High</b>	<b>Low</b>
Part time	0.33	7	1
Full time	0.23	10	1

**Question 11:**

Most respondents do not work with a dental hygiene assistant.

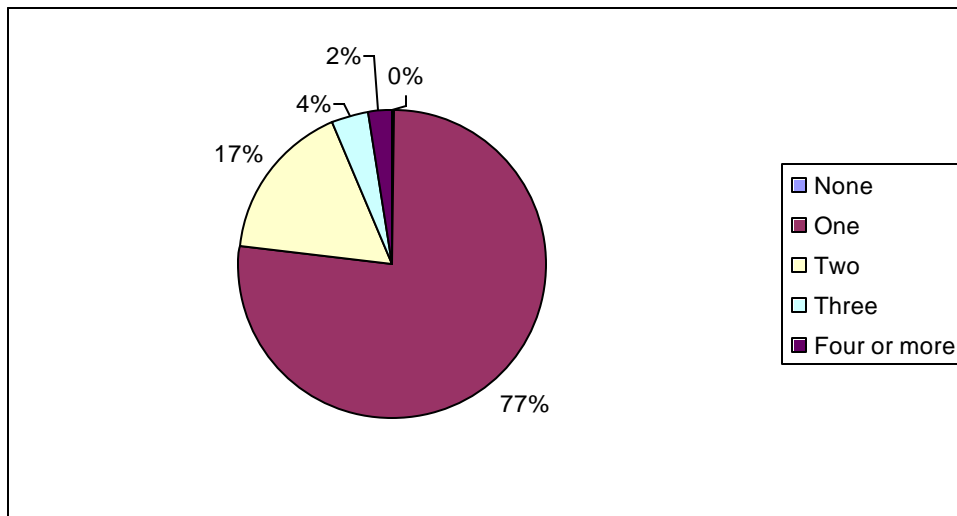
<b>Q11. At the location where you provide the majority of your dental hygiene services, do you work with a designated dental hygiene assistant?</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
Yes	163	10.6%
No	1381	89.4%
<b>N</b>	<b>1544</b>	



**Question 12:**

Most respondents reported working out of 1 or 2 treatment rooms. A very small number reported having no treatment room.

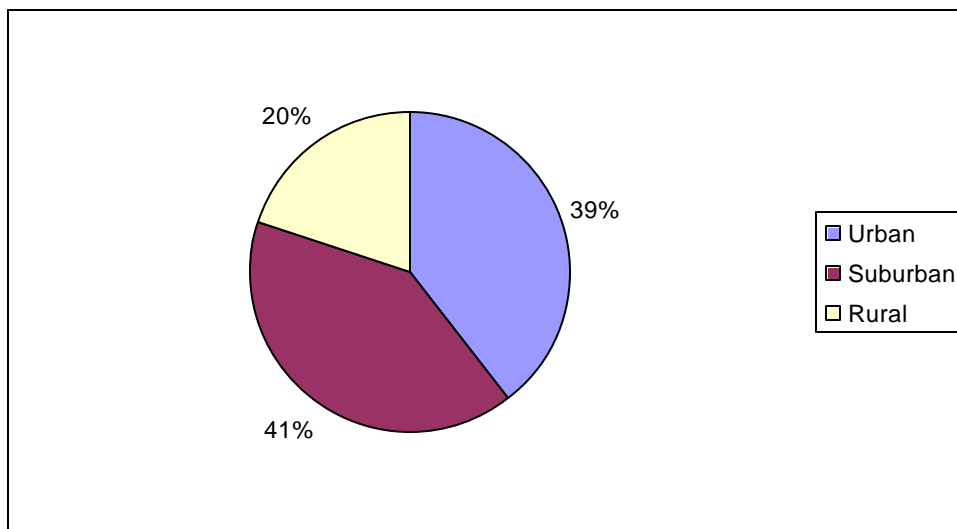
<b>Q12. At the location where you provide the majority of your dental hygiene services, how many treatment rooms do you work out of?</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
None	6	0.4%
One	1186	76.6%
Two	259	16.7%
Three	59	3.8%
Four or more	38	2.5%
<b>N</b>		<b>1548</b>



**Question 13:**

Most respondents reported working in Urban and Suburban areas in Wisconsin. 2 out of 10 reported working in a rural setting.

<b>Q13. How would you describe the location of the practice?</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
Urban	598	39.4%
Suburban	616	40.6%
Rural	302	19.9%
<b>N</b>	<b>1516</b>	



**Question 14:**

Respondents reported spending the most time per visit with adults. This was followed by teen-agers, then children.

<b><i>Q14. On average, how many minutes do you spend with the following patients during each visit?</i></b>			
<b>Response</b>	<b>Mean</b>	<b>High</b>	<b>Low</b>
Children	30.99	70	1
Teens	39.45	98	2
Adults	52.03	95	1

**Question 15:**

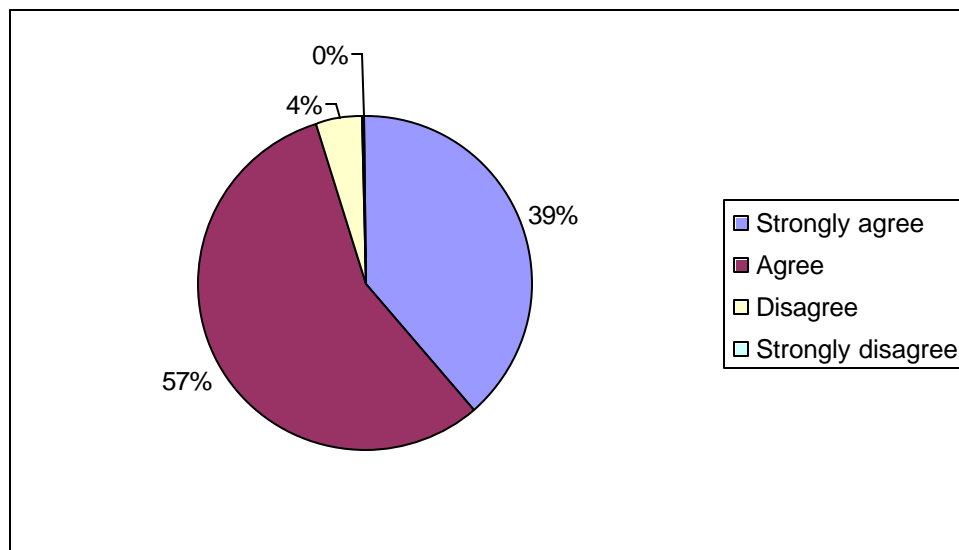
Most respondents reported working the most hours in group dental practice settings followed by private office settings.

<b><i>Q15. Please indicate the average number of hours per week you provide dental hygiene services in the following dental SETTINGS (enter all that apply)</i></b>			
<b>Response</b>	<b>Mean</b>	<b>High</b>	<b>Low</b>
Private office	26.6	70	1
Hospital, hospice, long term	21.53	60	1
Correctional facility	27.5	67	6
Dental hygiene education prog.	15.19	70	1
Public health department	26.5	70	1
Community clinic	23.33	70	2
Volunteer community service	4.68	40	1
Group dental practice	27.58	60	1

**Question 16:**

Dental hygienists report that they are satisfied with their jobs. 95.2% report positive satisfaction versus 4.8% who report a negative satisfaction.

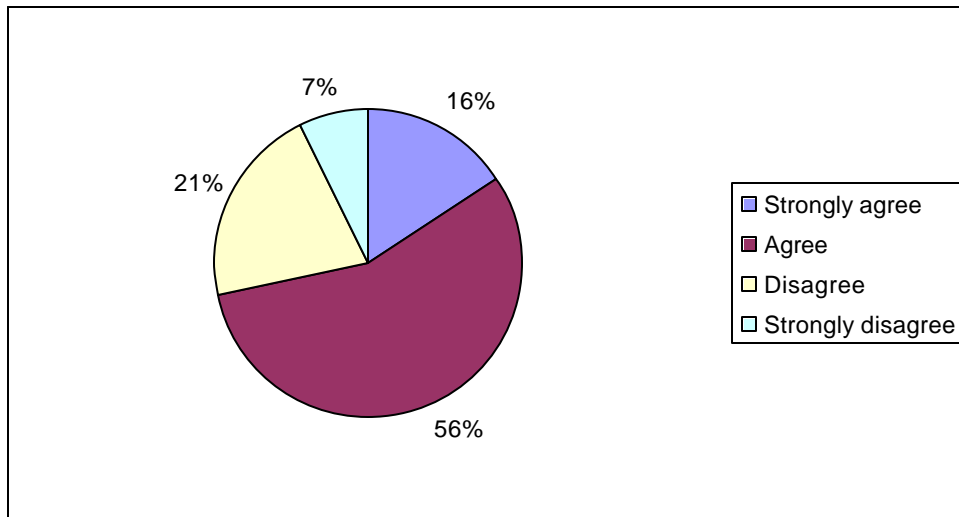
<b>Q16. I am satisfied with my job as a dental hygienist.</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
Strongly agree	596	38.6%
Agree	875	56.6%
Disagree	68	4.4%
Strongly disagree	6	0.4%
<b>N</b>	<b>1545</b>	



**Question 17:**

Most hygienists agree that there are enough employment opportunities in their areas to support the number of hours they want to work. 71.5% responded positively to this question versus 28.4%. While the majority felt there were enough opportunities, there was still 1 out of 4 who did not.

<b>Q17. Employment opportunities in my area are adequate for desired amount of employment hours.</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
Strongly agree	241	15.8%
Agree	850	55.7%
Disagree	322	21.1%
Strongly disagree	112	7.3%
<b>N</b>	<b>1525</b>	

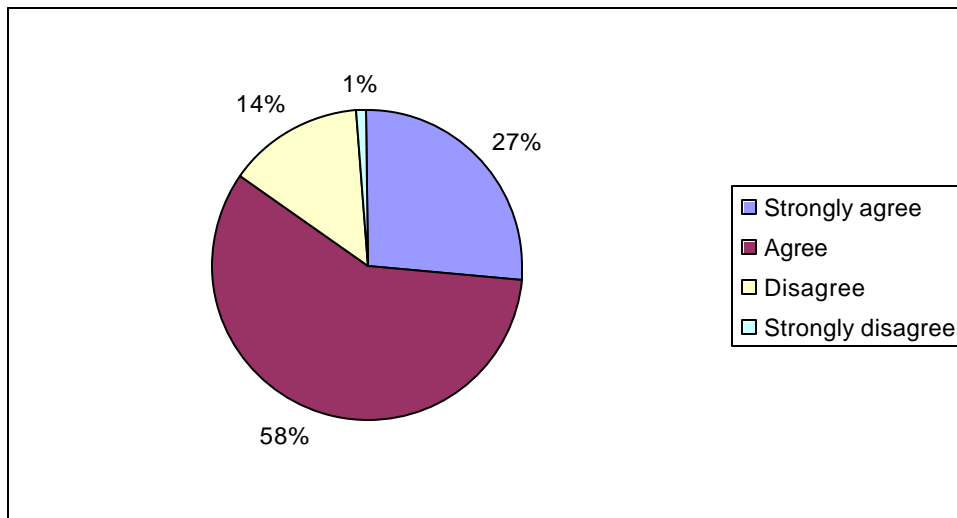




**Question 18:**

The dental hygienists responded positively that there are enough dental hygienists in their area to provide adequate patient access to care. 84.7% responded positively to this statement versus 15.3%.

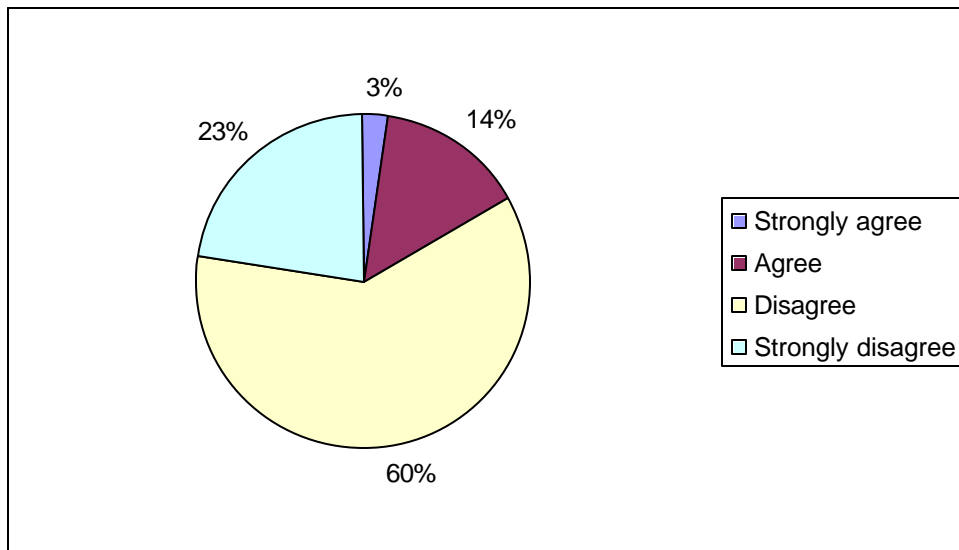
<b>Q18. I believe that there are enough dental hygienists in my area to provide adequate access to patients.</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
Strongly agree	405	26.5%
Agree	888	58.2%
Disagree	214	14.0%
Strongly disagree	19	1.2%
<b>N</b>	<b>1526</b>	



**Question 19:**

Most respondents disagreed that patients were limited in their ability to access care in their area. 83.2% disagreed with this statement versus 16.8% who agreed.

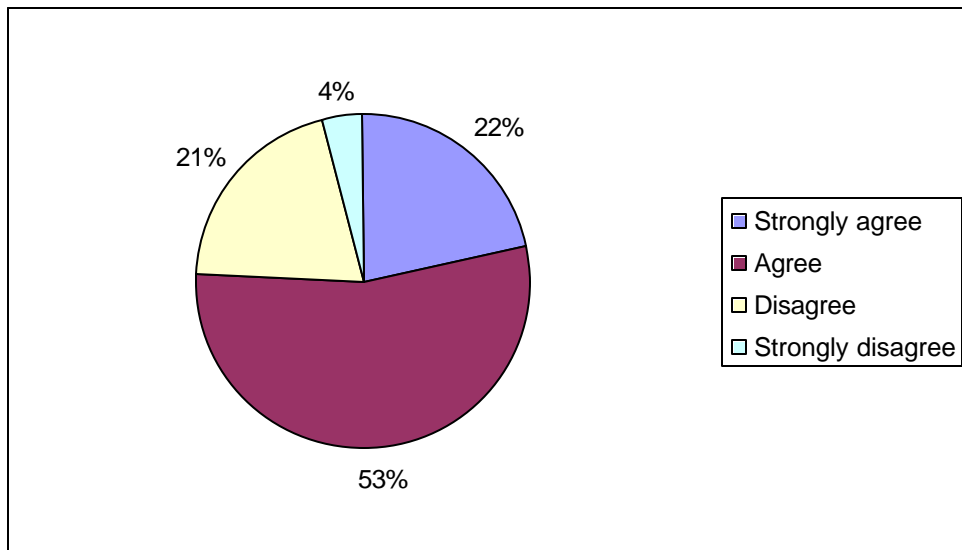
<b>Q19. Patient's access to care in my area is limited (e.g. transportation difficulty, financial consideration).</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
Strongly agree	41	2.7%
Agree	216	14.1%
Disagree	922	60.4%
Strongly disagree	348	22.8%
<b>N</b>	<b>1527</b>	



**Question 20:**

Most respondents felt that they had enough time to educate and care for their patients. 75.4% responded positively to this statement, versus 24.6% who responded negatively.

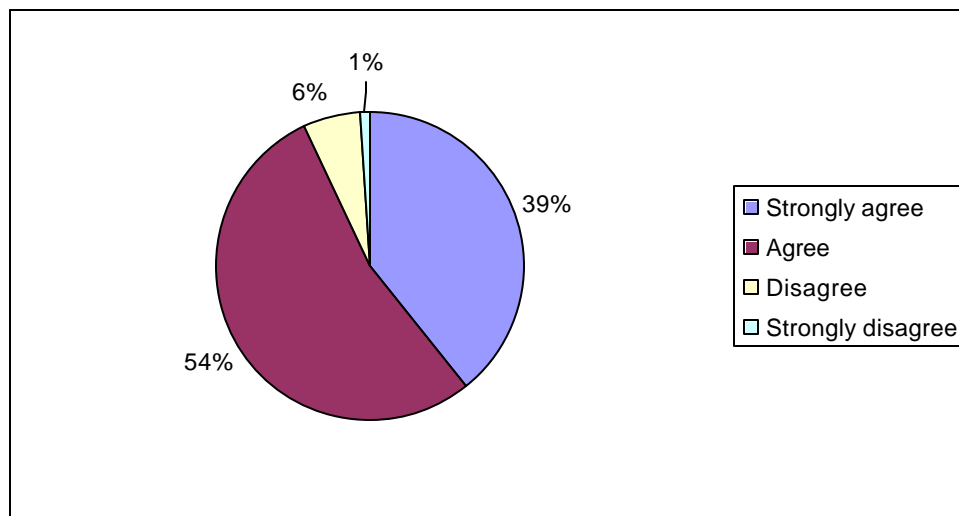
<b>Q20. I am able to spend as much time as necessary to educate and care for my patients.</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
Strongly agree	338	22.0%
Agree	822	53.4%
Disagree	320	20.8%
Strongly disagree	58	3.8%
<b>N</b>	<b>1538</b>	



**Question 21:**

The majority of respondents felt valued as an employee. 93.2% responded positively to this statement, versus 6.8% who responded negatively.

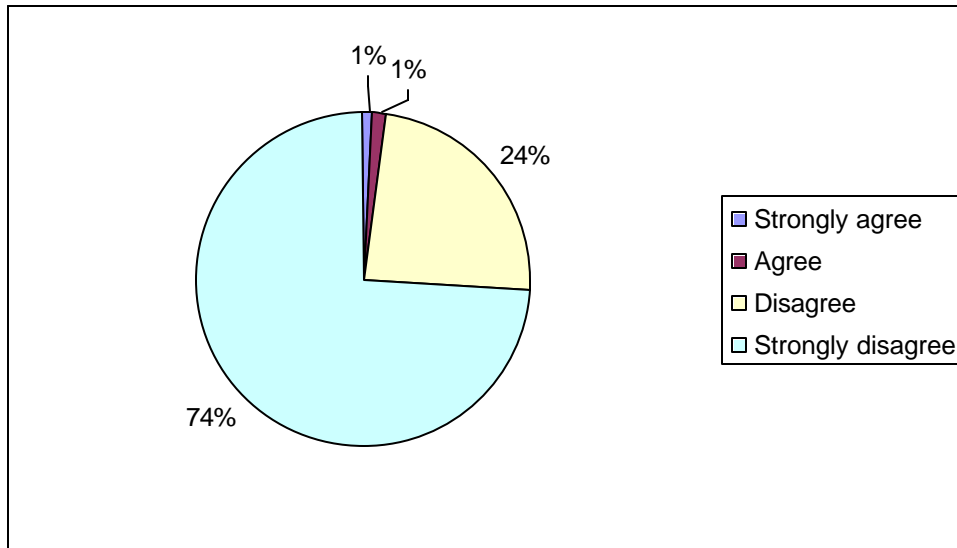
<b>Q21. My employer sees value in the work I do.</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
Strongly agree	602	39.3%
Agree	826	53.9%
Disagree	88	5.7%
Strongly disagree	17	1.1%
<b>N</b>		<b>1533</b>



**Question 22:**

The respondents overwhelmingly felt that their employer would not be able to treat the same number of patients if there were no dental hygienists present. 97.5% disagreed with the question versus 2.5% who agreed.

<b>Q22. My employer would still be able to treat the same number of patients if there were no dental hygienists present.</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
Strongly agree	15	1.0%
Agree	23	1.5%
Disagree	363	23.6%
Strongly disagree	1139	74.0%
<b>N</b>		<b>1540</b>



**Question 23:**

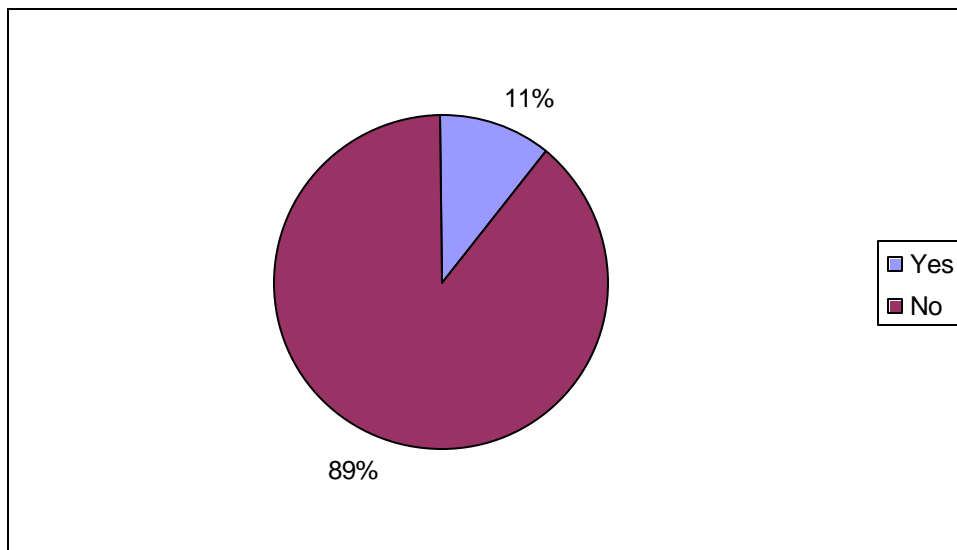
The average per hour wage reported by the respondents was \$23.53.

<b>Q23. On average, how much do you earn from dental hygiene services per hour (rounded to the nearest dollar, no cents, gross amount, before taxes)?</b>			
<b>Response</b>	<b>Mean</b>	<b>High</b>	<b>Low</b>
Hourly wage	23.53	75	1

**Question 24:**

Most respondents do not receive any merit or bonus income based on the number of patients seen.

<b>Q24. Do you receive any merit or bonus income based numbers of patients seen?</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
Yes	170	11.1%
No	1363	88.9%
<b>N</b>	<b>1533</b>	



**Question 25:**

For those respondents who reported they are paid a monthly bonus for patients seen, the average per month amount was \$159.85.

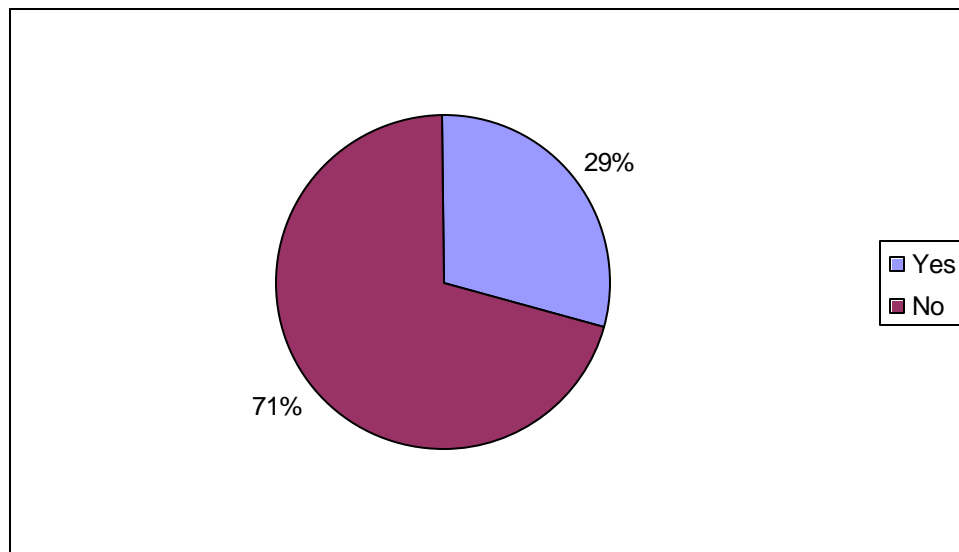
<b>Q25. If yes, on average, how much does this amount to each month?</b>			
<b>Response</b>	<b>Mean</b>	<b>High</b>	<b>Low</b>
Bonus wage	159.85	800	6



**Question 26:**

One-third of the respondents stated that they were the primary adult wage earner in their home.

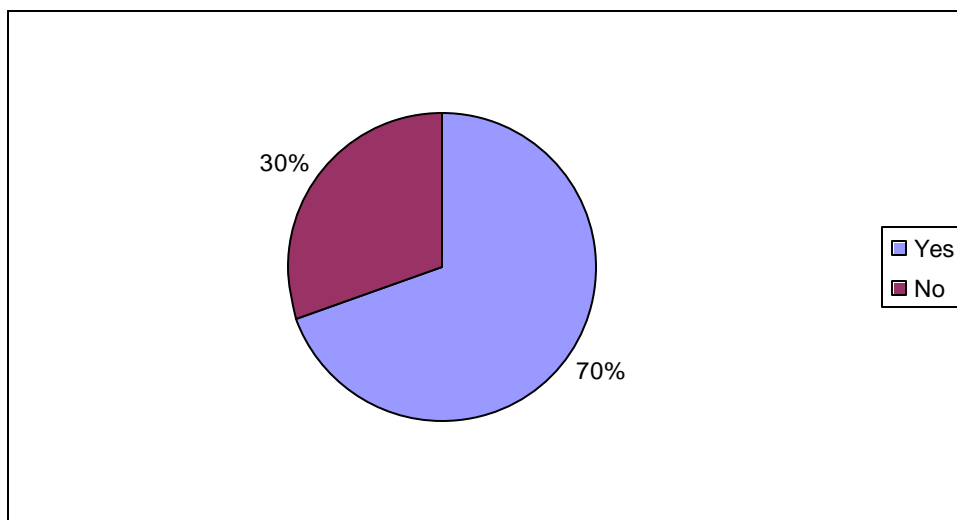
Q26. Are you the <u>primary adult</u> wage earner in your home?		
Response	Frequency	%
Yes	453	29.5%
No	1085	70.5%
N		1538



**Question 27:**

Two-thirds of the respondents reported receiving health or other benefits from a spouse.

<b>Q27. Do you receive health or other benefits from a spouse?</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
Yes	1066	69.6%
No	466	30.4%
<b>N</b>	<b>1532</b>	

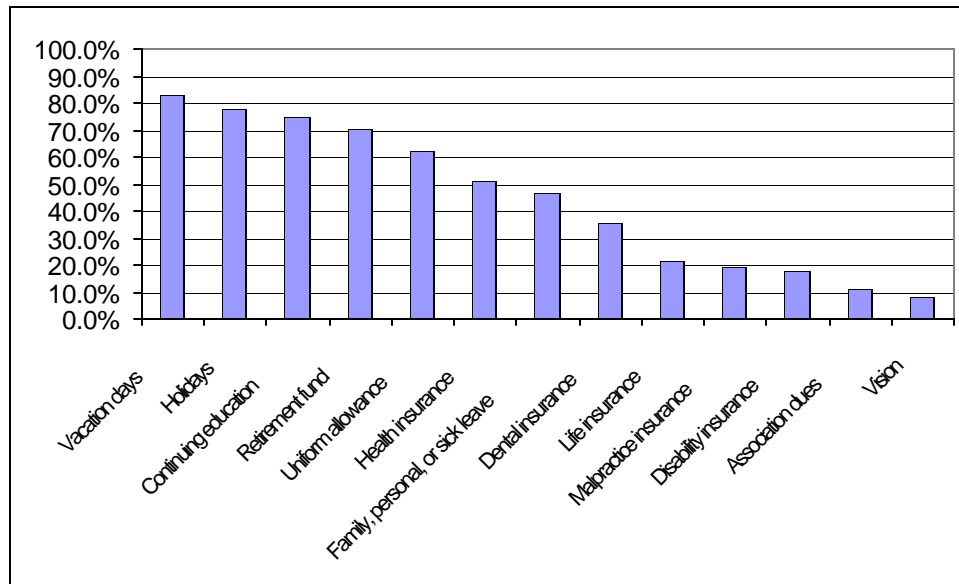


**Question 28:**

There are a variety of benefits offered to dental hygienists. The most prevalent are vacation days, holidays, continuing education, and retirement funds. Approximately one-half reported not being offered health insurance as part of their employment.

**Q28. Please indicate the type(s) of benefits you are offered (even if you choose not to make use of them), as part of performing dental hygiene services (check all that apply).**

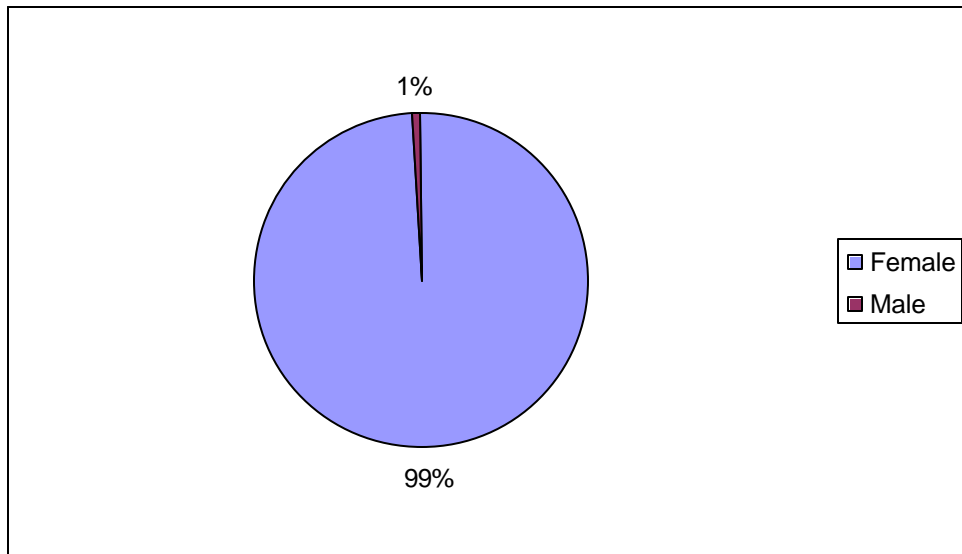
Response	Frequency	%
Vacation days	1301	83.0%
Holidays	1216	77.6%
Continuing education	1172	74.7%
Retirement fund	1108	70.7%
Uniform allowance	980	62.5%
Health insurance	801	51.1%
Family, personal, or sick leave	734	46.8%
Dental insurance	561	35.8%
Life insurance	334	21.3%
Malpractice insurance	305	19.5%
Disability insurance	276	17.6%
Association dues	171	10.9%
Vision	129	8.2%



**Question 29:**

Women, overwhelmingly, were the majority of respondents to the questionnaire.

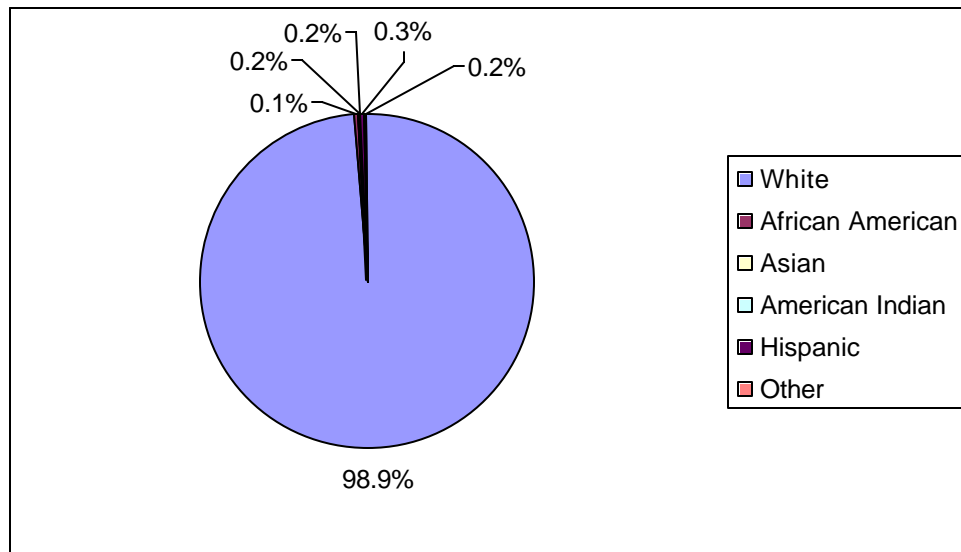
<b>Q29. What is your gender?</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
Female	1650	99.2%
Male	13	0.8%
<b>N</b>	<b>1663</b>	



**Question 30:**

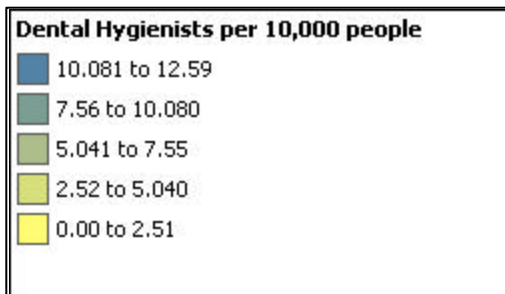
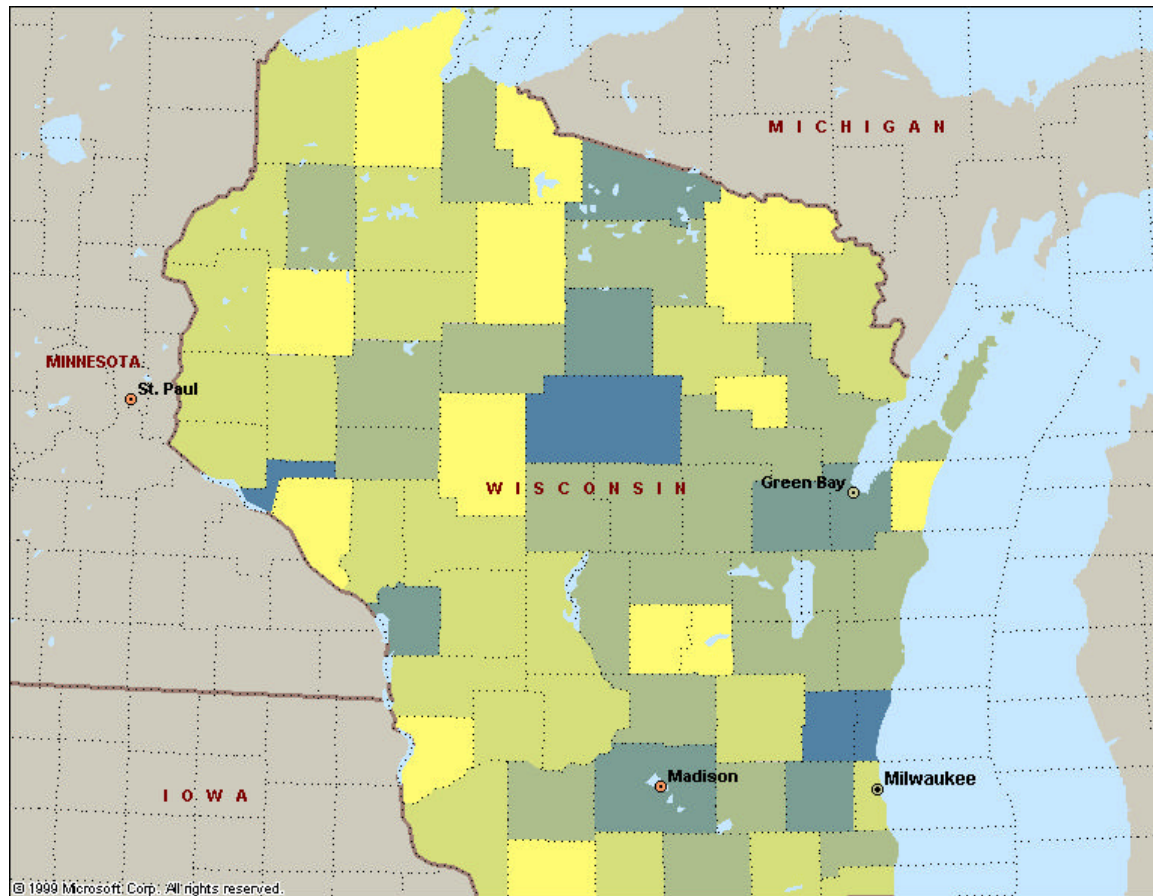
Respondents were nearly all Caucasian. Very small numbers represented the other race and ethnic groups. Wisconsin, in general, is not an ethnically varied state. However, there are counties the state where the combined minority population is nearly 20% of the total county population.

<b>Q30. What is your race?</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>
White	1637	98.9%
African American	2	0.1%
Asian	4	0.2%
American Indian	4	0.2%
Hispanic	5	0.3%
Other	3	0.2%
<b>N</b>		<b>1655</b>

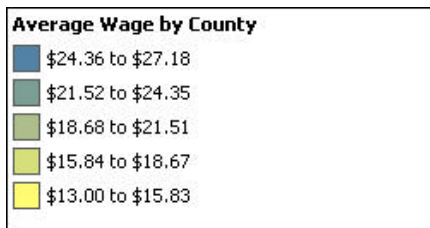
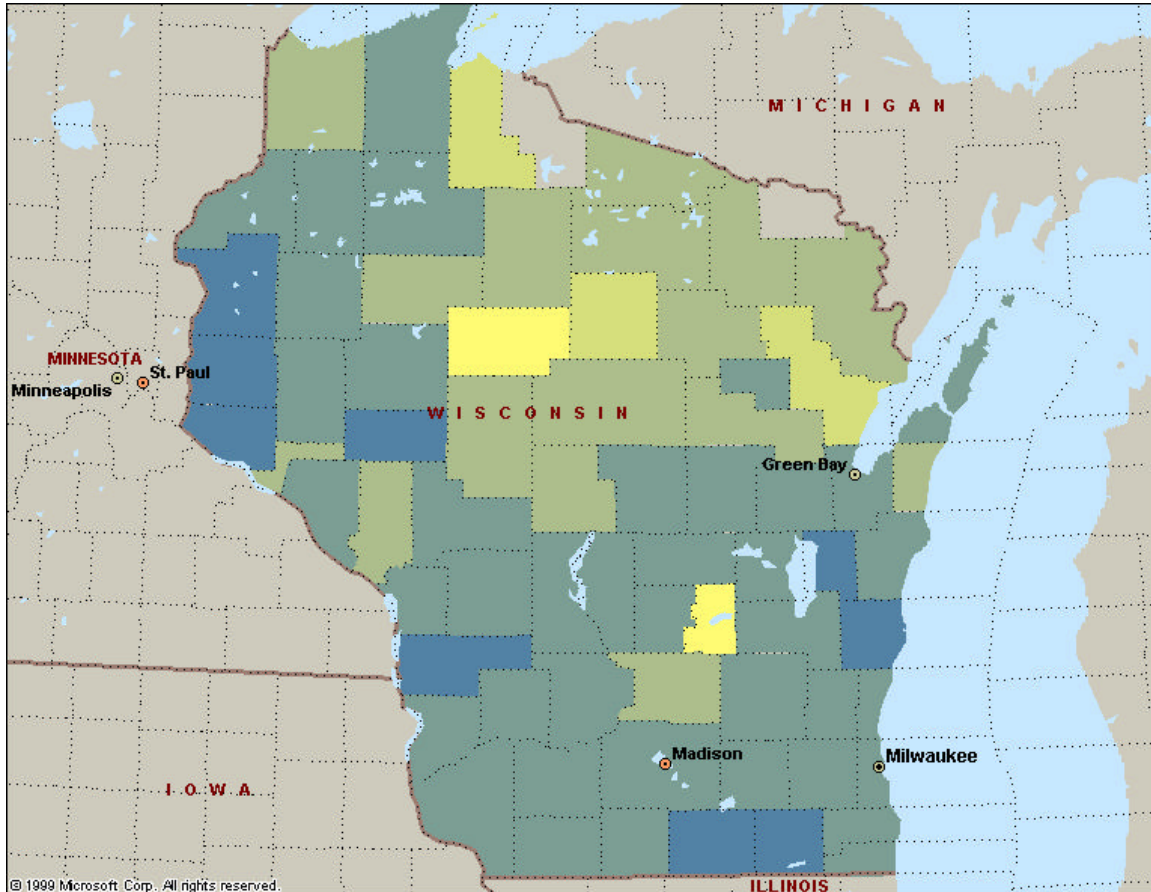


**Question 31:**

With the exception of three counties (Jackson, Buffalo, and Menominee), all counties were represented by a survey respondent. In order to understand potential access limitations and distribution, a dental hygiene rate was calculated. That is, the map below presents the number of dental hygienists for every 10,000 people in a county. Wisconsin population estimates were obtained from the United States Census Department, 1998 State of Wisconsin Population Estimates. The state average rate is 6.16 dental hygienists to every 10,000 people.



There is significant variability in the distribution of dental hygienists through the state of Wisconsin. For instance, the highest single county rate in Wisconsin is Pepin County (12.58) followed by Ozaukee County (11.57). The lowest was Crawford County (0), followed by Barron County (0.45). Dental hygienist distribution did not appear to be a component of population alone. That is, higher rates of dental hygienists did not seem to mirror more populous counties, as is often the case with professional services. One component that could drive distribution would be income. In other words, people migrate to areas that pay better. The following map shows each county's reported average per hour wage.



The wage distribution in Wisconsin does not correlate with that of the dental hygiene population. That is, it does not appear that higher wages are an answer to the question of distribution. Distribution appears to be driven by other factors.

Finally, a look at metropolitan versus non-metropolitan rates was calculated. For this analysis, data regarding number of dentists per county is included. Data on dentists comes from the State of Wisconsin's Office of Health Care Information's Wisconsin Provider Workforce Data Report: Summer 1996.<sup>2</sup>

Year	County Summary	Total Population	Number of dental hygienists	Rate per 10,000	Number of dentists	Rate per 10,000
1998	Metropolitan	3,657,977	2,505	6.8	2,597	7.1
1998	Non-Metropolitan	1,699,496	797	4.7	851	5.0

The state of Wisconsin identifies 20 out of 72 counties as Metropolitan. A rate for both metropolitan and non-metropolitan counties was calculated. There is a similar increase in the number of dental hygienists working in metropolitan counties as there are dentists. It is apparent that rates for non-metropolitan counties are notably smaller than their metropolitan peers. In fact, the statewide dental hygienist per 10,000 member rate is 6.16. That is, non-metropolitan areas appear to be underserved not only when looking at metropolitan counties, but the state as a whole.

Please refer to Attachment A to review the full dental hygienist/dentist rate by county table.

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<sup>2</sup> The report is a collection of provider data collected by the Office of Health Care Information (OHCI), and is the most recent data available. The reader should keep in mind that number of dentists and the county rates were calculated by OHCI based on January 1994 population estimates. The Metropolitan and Non-Metropolitan discussion uses the same 1998 population numbers. Therefore, the potential is for a slight per 10,000 rate calculation error for dentists within these two looks. Additionally, a dentist was reported by county(ies) of practice in this analysis. The dental hygienist numbers were reported by county of residence as determined by zip code associated with license information.



## **Discussion and Recommendations**

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The results of the survey bring to light a number of issues related to dental hygiene practice in Wisconsin. Dental hygienists respond that they are satisfied with their job, feel valued as an employee, and do not appear to change jobs very often. The majority of dental hygienists report having enough time to spend with patients. Additionally, they believe that patient access to dental hygiene services is good.

Approximately 28% of the respondents felt that there were not enough job opportunities to support the hours they want to work. There was not a significant difference based on age, years in practice or how many offices they have worked at compared to the respondents who did not express limited job opportunities. Of the counties who had more than 30 respondents, the following had 50% or more of the respondents report not having enough job opportunities available:

- La Crosse
- Marathon
- Outagamie
- Winnebago
- Wood

Most dental hygienists are choosing to work part time. In addition, the majority are working at one location. Wages earned by dental hygienists is variable throughout the state, with the average being \$23.53 per hour.

Women dominate the profession of dental hygiene. There is little racial diversity within the profession. The average age of a dental hygienist in Wisconsin is 40.6 years old. The average number of years practicing is 14.6. This implies that most dental hygienists do not enter into the profession until the age of 26 years old. The majority of dental hygienists received their professional training in associate degree programs: generally two years in duration. Dental hygienists do not appear to be entering into the profession as a primary career track. That is, they do not appear to be choosing to enter the profession from high school, instead choosing the career later in life.

One-third of the dental hygienists report being the primary wage earner in their home, while two-thirds report receiving health and other benefits from a spouse. Future survey plans should take into consideration the marital status of dental hygienists. Because the question was not asked, it is difficult to understand the connection between wage earner status and availability of benefits.

Dental hygienists are represented at various rates per 10,000 in Wisconsin's counties. Non-metropolitan counties are slightly underrepresented. The average metropolitan rate is 6.8 per 10,000 compared to the non-metropolitan rate of 4.7.

Taking into account the points listed above, certain areas will be worthy of the Workforce's focus in the upcoming years. They focus on demographic considerations, recruitment, diversity, and retention.

- Dental hygienists, for the most part, are women. They enter the career later in life. This raises the possibility that dental hygiene is not considered the first career option for young employees. It also raises the possibility that entry into the profession may follow substantial changes in lifestyle. That is, are women entering into the dental hygiene profession as a means to supplement income now that children are entering school ages, or is it coincidence that most dental hygienists do not start working until the age of 26, and work part-time? The implication of these demographic decision-making factors are important considerations in future planning.
- Efforts need to focus on ways of attracting young people into the profession early on. Job fairs and counseling at the high school level should help elucidate the benefits and high satisfaction level within the profession, and encourage people coming out of high school to choose dental hygiene as their first career choice. Additional efforts aimed at understanding what dental hygienists' job choices were between high school graduation and becoming licensed professionals may be in order.
- Diversity. The current demographics of dental hygienists in Wisconsin imply a homogeneous population. While Wisconsin is not a racially varied state when compared to others, there are very distinct geographic areas that have a high degree of racial diversity. The following counties have a greater than 15% non-white population:
  - Kenosha (17.4%)
  - Menominee (89.6%)
  - Milwaukee (36.8%)
  - Racine (25.5%)
  - Sawyer (17.8%)

Unless the dental hygiene profession can attract minority members, these geographic areas may be underserved. Additionally, ability to understand the ethnic differences within patient populations will be compromised.

- It is difficult to fully understand the importance of benefits on retention of members. Clearly, the majority report getting health benefits from a spouse. However, when asked what benefits they are offered, only one-half report that they are offered health benefits. This implies that those who cannot rely on a spouse for benefits may have a difficult time obtaining employer-sponsored health benefits. Further review and understanding is required to determine if this is a major reason for dental hygienists to either leave the profession, or not enter into it in the first place.

## **Attachment A: Dental Hygienist Rates by County**

Census Year	County	1998 Estimated Population	Hygienists	Hygienist Rate	Dentists	Dentist Rate
1998	Adams County	18969	10	5.3	5	3
1998	Ashland County	16619	9	5.4	12	7.3
1998	Barron County	44125	2	0.5	26	6.2
1998	Bayfield County	15221	3	2.0	4	2.8
<b>1998</b>	<b>Brown County</b>	<b>217712</b>	<b>205</b>	<b>9.4</b>	<b>126</b>	<b>6.1</b>
1998	Buffalo County	14360	2	1.4	7	5.1
1998	Burnett County	14708	5	3.4	3	2.2
<b>1998</b>	<b>Calumet County</b>	<b>38630</b>	<b>26</b>	<b>6.7</b>	<b>14</b>	<b>3.9</b>
<b>1998</b>	<b>Chippewa County</b>	<b>54837</b>	<b>33</b>	<b>6.0</b>	<b>30</b>	<b>5.6</b>
1998	Clark County	33319	8	2.4	14	4.4
1998	Columbia County	51760	34	6.6	28	6
1998	Crawford County	16670	0	0.0	5	3.1
<b>1998</b>	<b>Dane County</b>	<b>434008</b>	<b>360</b>	<b>8.3</b>	<b>257</b>	<b>6.6</b>
1998	Dodge County	84734	31	3.7	31	3.9
1998	Door County	27252	17	6.2	15	5.8
<b>1998</b>	<b>Douglas County</b>	<b>43329</b>	<b>18</b>	<b>4.2</b>	<b>23</b>	<b>5.5</b>
1998	Dunn County	39265	11	2.8	16	4.4
<b>1998</b>	<b>Eau Claire County</b>	<b>89942</b>	<b>63</b>	<b>7.0</b>	<b>69</b>	<b>7.9</b>
1998	Florence County	5219	1	1.9	1	2.1
1998	Fond du Lac County	96116	61	6.3	53	5.7
1998	Forest County	9688	2	2.1	4	4.5
1998	Grant County	49578	14	2.8	32	6.5
1998	Green County	33592	12	3.6	15	4.9
1998	Green Lake County	19729	1	0.5	11	5.8
1998	Iowa County	22500	12	5.3	7	3.4
1998	Iron County	6361	1	1.6	3	4.8
1998	Jackson County	17932	5	2.8	4	2.4
1998	Jefferson County	75337	45	6.0	39	5.6
1998	Juneau County	24071	10	4.2	6	2.7
<b>1998</b>	<b>Kenosha County</b>	<b>153263</b>	<b>69</b>	<b>4.5</b>	<b>87</b>	<b>6.4</b>
1998	Kewaunee County	19888	5	2.5	10	5.2
<b>1998</b>	<b>La Crosse County</b>	<b>103561</b>	<b>81</b>	<b>7.8</b>	<b>94</b>	<b>9.3</b>
1998	Lafayette County	16311	4	2.5	7	4.3
1998	Langlade County	20622	7	3.4	11	5.5
1998	Lincoln County	29918	28	9.4	13	4.7
1998	Manitowoc County	83264	54	6.5	53	6.5
<b>1998</b>	<b>Marathon County</b>	<b>123943</b>	<b>141</b>	<b>11.4</b>	<b>80</b>	<b>6.6</b>
1998	Marinette County	43270	12	2.8	19	4.6
1998	Marquette County	15370	3	2.0	2	1.6
1998	Menominee County	4876	1	2.1	2	4.9
<b>1998</b>	<b>Milwaukee County</b>	<b>969445</b>	<b>386</b>	<b>4.0</b>	<b>868</b>	<b>9</b>
1998	Monroe County	39900	14	3.5	19	5
1998	Oconto County	34198	24	7.0	12	3.8
1998	Oneida County	35829	20	5.6	33	10
<b>1998</b>	<b>Outagamie County</b>	<b>157869</b>	<b>148</b>	<b>9.4</b>	<b>129</b>	<b>8.7</b>

Census Year	County	1998 Estimated Population	Hygienists	Hygienist Rate	Dentists	Dentist Rate
1998	<b>Ozaukee County</b>	<b>81908</b>	<b>95</b>	<b>11.6</b>	<b>55</b>	<b>7.2</b>
1998	Pepin County	7150	9	12.6	3	4.2
1998	<b>Pierce County</b>	<b>35919</b>	<b>18</b>	<b>5.0</b>	<b>17</b>	<b>5.1</b>
1998	Polk County	39000	15	3.8	22	6.2
1998	Portage County	65623	43	6.6	43	6.7
1998	Price County	15902	4	2.5	7	4.4
1998	<b>Racine County</b>	<b>199442</b>	<b>107</b>	<b>5.4</b>	<b>117</b>	<b>6.5</b>
1998	Richland County	17975	7	3.9	9	5.1
1998	<b>Rock County</b>	<b>153447</b>	<b>83</b>	<b>5.4</b>	<b>89</b>	<b>6.2</b>
1998	Rusk County	15371	5	3.3	6	3.9
1998	Sauk County	53741	27	5.0	30	6.1
1998	Sawyer County	16264	7	4.3	8	5.4
1998	Shawano County	38947	26	6.7	18	4.8
1998	<b>Sheboygan County</b>	<b>112752</b>	<b>75</b>	<b>6.7</b>	<b>54</b>	<b>5</b>
1998	<b>St. Croix County</b>	<b>59278</b>	<b>29</b>	<b>4.9</b>	<b>23</b>	<b>4.4</b>
1998	Taylor County	19377	12	6.2	7	3.7
1998	Trempealeau County	26554	13	4.9	10	3.9
1998	Vernon County	27506	12	4.4	11	4.2
1998	Vilas County	21389	17	7.9	12	6.5
1998	Walworth County	88649	28	3.2	47	5.9
1998	Washburn County	15477	11	7.1	5	3.5
1998	<b>Washington County</b>	<b>115074</b>	<b>117</b>	<b>10.2</b>	<b>62</b>	<b>5.9</b>
1998	<b>Waukesha County</b>	<b>362040</b>	<b>348</b>	<b>9.6</b>	<b>301</b>	<b>9.3</b>
1998	Waupaca County	51176	29	5.7	25	5.2
1998	Waushara County	22219	16	7.2	2	1
1998	<b>Winnebago County</b>	<b>151578</b>	<b>103</b>	<b>6.8</b>	<b>102</b>	<b>7</b>
1998	Wood County	76605	48	6.3	64	8.5
1998	WISCONSIN	5357473	3302	6.2	3448	6.4

=Metropolitan County

## **Attachment B: Survey Instruments and Materials**

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## Front Postcard

Meridian Resource-Innovative Resource Group  
10 East Doty Street, Suite 210  
Madison, WI 53703

-For-

Wisconsin Dental Association Workforce Group  
and Dental Hygiene Association of Wisconsin

<<firstname>> <<lastname>> RDH  
<<street address>>  
<<city>>, <<state>> <<zip>>

## Rear Postcard

### **WE NEED YOUR HELP**

You will be receiving the “Dental Hygiene Workforce Survey” in the next few days. This survey has been developed by a team of research experts, dental hygienists, and dentists.

Your timely response will ensure that:

- Professional decisions will be made with facts provided by registered dental hygienists;
- Results will be available to you and your employers to understand the dental hygiene workforce; and
- Information will be provided to State and Federal policymakers ensuring that registered dental hygienists will continue to play an important role in the dental health of Wisconsin’s population.

We will keep your answers confidential. Thank you, in advance, for your time and careful response to this important survey.



Cover letter



{Member first name} {Member last name}, RDH  
{Member address 1}  
{Member address 2}  
{Member city}, {Member state}, {Member zip}

**RE: DENTAL HYGIENE WORKFORCE SURVEY**

Dear {Member first name}:

Meridian Resource-Innovative Resource Group, an independent agency of research experts, has been selected by the **Dental Hygiene Association of Wisconsin (DHAW) and the Wisconsin Dental Association (WDA) Workforce Group** to survey dental hygienists in Wisconsin.

The purpose of this survey is to assess and analyze current dental hygiene workforce and help prepare for future needs of Wisconsin consumers. Information will be provided to State and Federal policymakers ensuring that registered dental hygienists will continue to play a role in the dental health of Wisconsin's population.

You were chosen as part of a special group and we gratefully request your accurate and immediate response. Enclosed is a survey that asks about your experience as a registered dental hygienist. Please be assured that all individual information will be kept strictly confidential.

When you finish this survey, please mail it in the enclosed envelope by **\*\*INSERT DATE 2 WEEKS FROM MAILING\*\***. Again, your individual information will be kept confidential and your input will be most valuable in helping DHAW and WDA assess and project dental hygiene workforce needs.

Sincerely,

A handwritten signature in black ink, appearing to read "J. M. Gray".

Jeff M. Gray, RN  
Consultant  
Meridian Resource-Innovative Resource Group

Mailing Envelope

Meridian Resource-Innovative Resource Group  
10 East Doty Street, Suite 210  
Madison, WI 53703

Address window

**IMPORTANT: Dental Hygiene Workforce Survey Enclosed**

## Dental Hygiene Workforce Survey

### Job Description

**1. What is your highest level of education? (please check one)**

- ☐ Associate Degree  
☐ BSDH  
☐ BS/BA  
☐ MS/MA  
☐ Ph.D.

**2. Are you currently working as a dental hygienist?**

- ☐ Yes    ☐ No

**3. If no, please select the best reason why not.**

- ☐ In between jobs  
☐ Retired  
☐ Choosing not to work at this time  
☐ Changed professions  
☐ Can't find work as hygienist  
☐ Going back to school  
☐ Other

**4. Are you currently seeking employment as a dental hygienist?**

- ☐ Yes    ☐ No

**a. If yes, how long have you been seeking employment?**

- ☐ less than a month  
☐ 1 to 2 months  
☐ 3 to 6 months  
☐ more than 6 months

**5. Indicate the average number of hours per week for which you work as a dental hygienist.**

--	--

hours

example 

1	9
---	---

**6. Do you work as many hours as you would like?**

- ☐ Yes    ☐ No

**a. If no, how many more hours would you like to work?**

- ☐ 1 to 5  
☐ 6 to 10  
☐ 11 to 20  
☐ more than 20  
☐ would like to work fewer hours

**7. How many practices/settings do you provide dental hygiene services to?**

- ☐ One    ☐ Two    ☐ Three    ☐ Four or more

**8. At how many different practices have you worked since you have been licensed as a dental hygienist?**

- ☐ 1    ☐ 2 to 3    ☐ 4 to 5    ☐ 5 or more

**9. How long have you worked at the location where you provide the majority of your dental hygiene services?**

- ☐ Less than 6 months  
☐ 6 months to 1 year  
☐ 1 to 3 years  
☐ 3 to 5 years  
☐ 5 or more years

**10. At the location where you provide the majority of your dental hygiene services, how many open dental hygienist positions are there?**

Part-time

--	--

Full-time

--	--

**11. At the location where you provide the majority of your dental hygiene services, do you work with a designated dental hygiene assistant?**

- ☐ Yes    ☐ No

**12. At the location where you provide the majority of your dental hygiene services, how many treatment rooms do you work out of?**

- ☐ 0    ☐ 1    ☐ 2    ☐ 3    ☐ 4 or more

**13. How would you describe the location of the practice?**

- ☐ Urban    ☐ Suburban    ☐ Rural

**14. On average, how many minutes do you spend with the following patients during each visit?**

Children

--	--

Teens

--	--

Adults

--	--

**15. Please indicate the average number of hours per week you provide dental hygiene services in the following dental practice SETTINGS (enter all that apply)**

--	--

Private office

--	--

Public health department

--	--

Hospital, hospice or long-term care

--	--

Community clinic

--	--

Correctional facility

--	--

Volunteer community service projects

--	--

Dental hygiene education

--	--

Group dental practice

example 

1	9
---	---

 hours

**Dental Hygiene Practice**

16. I am satisfied with my job as a dental hygienist.
17. Employment opportunities in my area are adequate for desired amount of employment hours.
18. I believe that there are enough dental hygienists in my area to provide adequate access to patients.
19. Patient's access to care in my area is limited (e.g. transportation difficulty, financial consideration).
20. I am able to spend as much time as necessary to educate and care for my patients.
21. My employer sees value in the work I do.
22. My employer would still be able to treat the same number of patients if there were no dental hygienists present.

Strongly Agree	Agree	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Income/Benefits/Insurance**

23. On average, how much do you earn from dental hygiene services per hour (rounded to nearest dollar, no cents, gross amount, before taxes)?

\$   example \$

24. Do you receive any merit or bonus income based on numbers of patients seen?

☐ Yes ☐ No

25. If yes, on average, how much does this amount to each month?

\$     example \$

26. Are you the primary adult wage earner in your home?

☐ Yes ☐ No

27. Do you receive health or other benefits from a spouse?

☐ Yes ☐ No

28. Please indicate the type (s) of benefits you are offered, (even if you choose not to make use of them), as part of performing dental hygiene services (check all that apply)

- |                                                       |                                            |
|-------------------------------------------------------|--------------------------------------------|
| <input type="radio"/> health insurance                | <input type="radio"/> retirement fund      |
| <input type="radio"/> dental insurance                | <input type="radio"/> continuing education |
| <input type="radio"/> vision                          | <input type="radio"/> uniform allowance    |
| <input type="radio"/> life insurance                  | <input type="radio"/> vacation days        |
| <input type="radio"/> disability insurance            | <input type="radio"/> holidays             |
| <input type="radio"/> family, personal, or sick leave | <input type="radio"/> association dues     |
| <input type="radio"/> malpractice insurance           |                                            |

**Personal Information**

29. What is your gender?

☐ Female ☐ Male

30. What is your race?

☐ White ☐ American Indian  
☐ African American ☐ Hispanic  
☐ Asian ☐ Other

31. What county or counties do you practice in? (mark all that apply)

☐ Do not practice in Wisconsin

- |                                  |                                   |                                 |                                   |
|----------------------------------|-----------------------------------|---------------------------------|-----------------------------------|
| <input type="radio"/> Adams      | <input type="radio"/> Florence    | <input type="radio"/> Marathon  | <input type="radio"/> Rusk        |
| <input type="radio"/> Ashland    | <input type="radio"/> Fond du Lac | <input type="radio"/> Marinette | <input type="radio"/> St. Croix   |
| <input type="radio"/> Barron     | <input type="radio"/> Forest      | <input type="radio"/> Marquette | <input type="radio"/> Sauk        |
| <input type="radio"/> Bayfield   | <input type="radio"/> Grant       | <input type="radio"/> Menominee | <input type="radio"/> Sawyer      |
| <input type="radio"/> Brown      | <input type="radio"/> Green       | <input type="radio"/> Milwaukee | <input type="radio"/> Shawano     |
| <input type="radio"/> Buffalo    | <input type="radio"/> GreenLake   | <input type="radio"/> Monroe    | <input type="radio"/> Sheboygan   |
| <input type="radio"/> Burnett    | <input type="radio"/> Iowa        | <input type="radio"/> Oconto    | <input type="radio"/> Taylor      |
| <input type="radio"/> Calumet    | <input type="radio"/> Iron        | <input type="radio"/> Oneida    | <input type="radio"/> Trempealeau |
| <input type="radio"/> Chippewa   | <input type="radio"/> Jackson     | <input type="radio"/> Outagamie | <input type="radio"/> Vernon      |
| <input type="radio"/> Clark      | <input type="radio"/> Jefferson   | <input type="radio"/> Ozaukee   | <input type="radio"/> Vilas       |
| <input type="radio"/> Columbia   | <input type="radio"/> Juneau      | <input type="radio"/> Pepin     | <input type="radio"/> Walworth    |
| <input type="radio"/> Crawford   | <input type="radio"/> Kenosha     | <input type="radio"/> Pierce    | <input type="radio"/> Washburn    |
| <input type="radio"/> Dane       | <input type="radio"/> Kewaunee    | <input type="radio"/> Polk      | <input type="radio"/> Washington  |
| <input type="radio"/> Dodge      | <input type="radio"/> LaCrosse    | <input type="radio"/> Portage   | <input type="radio"/> Waukesha    |
| <input type="radio"/> Door       | <input type="radio"/> Lafayette   | <input type="radio"/> Price     | <input type="radio"/> Waupaca     |
| <input type="radio"/> Douglas    | <input type="radio"/> Langlade    | <input type="radio"/> Racine    | <input type="radio"/> Waushara    |
| <input type="radio"/> Dunn       | <input type="radio"/> Lincoln     | <input type="radio"/> Richland  | <input type="radio"/> Winnebago   |
| <input type="radio"/> Eau Claire | <input type="radio"/> Manitowoc   | <input type="radio"/> Rock      | <input type="radio"/> Wood        |